

WHAT IS CLAIMED IS:

1. An information distribution service providing system, which has a server system and an information provider terminal connected to the server system, for  
5 distributing information, which has been requested by an information provider, via a network from the server system to mobile information terminals of service users for which utilization of an information providing service has been registered, wherein said information  
10 provider terminal includes means for designating, to the server system, an information distribution region and attributes of service users; and  
said server system includes:  
means for monitoring, based upon position  
15 information from service users for which utilization of an information providing service has been registered, the state of distribution of service users who have said attributes and are present in the information distribution region designated by the information  
20 provider; and  
means for distributing prescribed information to mobile information terminals of service users having said attributes based upon the state of distribution of service users.
- 25 2. An information distribution service providing system, which has a server system and an information provider terminal connected to the server system, for distributing information, which has been requested by an information provider, via a network from the server  
30 system to mobile information terminals of service users for which utilization of an information providing service has been registered, wherein said server system includes:  
(a) means having an interface, which is for  
35 sending and receiving various information to and from an information provider, for receiving via this interface a region designated by the information provider, and storing this region;  
(b) means having an interface, which is for  
40 sending and receiving various information to and from a mobile information terminal possessed by a service user, for receiving position information of the service user sent autonomously via this interface, and storing this position information;  
45 (c) means for extracting and storing a service

user located in said region that has been designated by the information provider;

(d) means for dividing the region that has been designated by the information provider into zones of small area and storing the region as a set of the zones;

(e) means for identifying service users located in each of the zones, calculating an attribute-by-attribute distribution density of the service users on a per-zone basis, and storing the distribution densities;

(f) means for reporting prescribed information to the information provider based upon the calculated distribution density of each attribute;

(g) means for receiving and storing location of the information provider;

(h) means for receiving and storing information desired to be distributed from the information provider;

(i) means for receiving, from the information provider, attributes of service users to whom information is to be distributed and distribution-destination information, and storing these attributes and information; and

(j) means for extracting service users, to whom information is to be distributed, based upon the attributes and distribution-destination information, and transmitting to these users the information that has been received from the information provider.

3. The system according to claim 2, wherein said server system further includes means for registering, in accordance with an agreement with a user, attribute information indicating characteristics and areas of interest of users necessary for classifying type of distribution information sought by the service users.

4. The system according to claim 2, wherein said server system includes means for accepting, from a service user, a request to change, pause, cancel or start operation of a registered service.

5. The system according to claim 2, wherein said server system includes means for accepting, processing, maintaining appropriately and managing information, which represents user attributes registered by the users, and a request to change registered content.

6. The system according to claim 2, wherein said

server system includes means for registering, in accordance with an agreement with an information provicer, location of the information provider that performs information distribution, location of a sales  
5 hub, information to be distributed, attributes of users at the destination of distribution, and distribution conditions.

7. The system according to claim 2, wherein said server system includes means for accepting, from an  
10 information provider, a request to change, pause, cancel or start registered content relating to distribution that has been registered.

8. The system according to claim 2, wherein said server system includes means for appropriately  
15 maintaining and managing information-provider information that has been registered by the information provider, and a request for changing distributed content.

9. The system according to claim 2, wherein said  
20 server system includes means for accepting an information request relating to state of distribution of user attributes who expect an effect such as an increase in sales owing to distribution of information by the information provider in a region designated by  
25 the information provider or server system operator.

10. The system according to claim 2, wherein said server system includes means for reporting result of an investigation, which has been requested by an  
30 information provider or server system, to a source of the request.

11. The system according to claim 2, wherein said server system includes means for storing a region designated by an information provider or server system operator, and storing this region as a set of data in a  
35 form in which area of a designated region can be calculated from map information.

12. The system according to claim 2, wherein said server system includes means for storing position information of service users and maintaining and  
40 managing position displacement information of these users.

13. The system according to claim 2, wherein said server system includes means for extracting and storing service users located in a region that has been  
45 designated by an information provider or server system

operator, said service users conforming to user attributes that have been designated by an information provider or server system operator.

14. The system according to claim 2, wherein said  
5 server system includes the following means as said means for calculating the attribute-by-attribute distribution density of the service user:

means for obtaining and storing area of a designated region;

10 means for extracting users who have a designated attribute from among service users located in a designated region, and storing the number of these users; and

means for calculating distribution density using  
15 the area obtained and the number of users having the designated attribute, and storing the distribution density.

15. The system according to claim 2, wherein said server system includes the following means as the means  
20 for calculating the attribute-by-attribute distribution density of the service user:

means for dividing a designated region into a plurality of zones of small area, expressing and storing the zones as a set of data that enables the  
25 area of each zone to be calculated, obtaining the areas of these zones and storing the same;

means for extracting users who have the designated attribute from among service users located in any zone, and storing the number of these users; and

30 means for calculating distribution density using the area obtained and the number of users having the designated attribute, and storing the distribution density.

16. The system according to claim 15, wherein said  
35 server system includes means for comparing distribution densities of a plurality of designated user attributes in a single applicable zone in which distribution densities have been calculated, calculating a difference in distribution density from one user  
40 attribute to another in said single applicable zone in a region that has been designated by the information provider or server system operator, and deciding ranking of the user attribute for distributing.

17. The system according to claim 15, wherein said  
45 server system includes means for comparing distribution

- densities of a single designated user attribute in a plurality of applicable zones in which distribution densities have been calculated, calculating differences in distribution density of the user attribute in a
- 5 plurality of applicable zones in a region that has been designated by the information provider or server system operator, and deciding ranking of the applicable zones for distributing.
18. The system according to claim 14,16 and 17 wherein
- 10 said server system includes means for deciding, in dependence upon state of distribution density of applicable user attributes, information distribution frequency or a technique such as concentrated distribution in a certain time frame.
19. The system according to claim 14, 16 and 17
- 15 wherein said server system includes means for performing information distribution based upon a reference determined in advance or a reference that has been designated by an information provider or server
- 20 system operator, using the result of calculating the attribute-by-attribute distribution density of the service user.
20. The system according to claim 2, wherein said
- 25 server system includes means for performing information distribution based upon a reference determined in advance or a reference that has been designated by an information provider or server system operator, using actual number of users located in each region.
21. The system according to claim 15, wherein said
- 30 server system includes means for calculating variance of a designated attribute distribution in an applicable region based upon the calculated distribution density of every user attribute.
22. The system according to claim 21, wherein said
- 35 server system includes means for performing information distribution based upon a reference that has been designated by an information provider or server system operator, using the calculated variance of every user attribute.
23. The system according to claims 14,15,18,19,20,21
- 40 and 22 wherein said server system includes means for reporting results obtained to an information distribution or server system operator that is the source of a request.
24. The system according to claims 14, 15,18,19,20,21
- 45

and 22 wherein said server system includes means for reporting information that has been pre-registered by an information provider for the sake of distribution based upon results obtained to applicable users in an applicable region in accordance with distribution density and variance of every user attribute located in the applicable region, and distribution conditions designated in advance by the information provider.

5     25. The system according to claim 15, wherein said  
10     server system includes means for estimating distance between a region for which the distribution density has been calculated and location or sales hub of an applicable information provider.

15     26. The system according to claim 15, wherein said  
server system includes means for calculating a time element such as time required for a user to move from a region for which the distribution density has been calculated to a location or sales hub of an applicable information provider.

20     27. The system according to claim 26, wherein said  
server system includes means for creating and editing, from results of the calculation, a recommendation regarding content of information distributed by an applicable information provider.

25     28. The system according to claim 27, wherein said  
server system includes means for reporting the content of the created recommendation to an applicable information provider.

30     29. The system according to claim 2, wherein said  
server system includes means for recording a time-series change in distribution density or variance of every user attribute in a region designated by an information provider or server system operator.

35     30. The system according to claim 29, wherein said  
server system includes means for calculating a change in region characteristics for every user attribute based upon the time-series change in distribution density or variance of every user attribute, and estimating an approximation function of a time-series

40     change in user attributes in a designated region or in a zone designated by subdividing said region.

45     31. The system according to claim 30, wherein said  
server system includes means, responsive to a request by an information provider, for obtaining prediction data of a regional change or time-series change in

distribution density or scattering of user attributes based upon results of the estimation, and reporting the prediction data to an applicable information provider.

5 32. The system according to claim 2, wherein said server system includes means for accepting and storing reaction of users to distributed information.

33. The system according to claim 32, wherein said server system includes means for analyzing accepted user reaction such as time from moment of distribution  
10 to user response, information indicating position of the user at this time, etc.

34. The system according to claim 33, wherein said server system includes means for statistically processing results of the analysis and outputting a  
15 report.

35. The system according to claim 34, wherein said server system includes means for reporting statistical results obtained to an information provider who has distributed applicable information.

20 36. An information distribution service providing system, which has a server system and an information provider terminal connected to the server system via a network, for distributing information, which has been requested by an information provider, via the network  
25 from the server system to mobile information terminals of service users for which utilization of an information providing service has been registered, wherein said information provider terminal includes means for designating to the server system, contents of  
30 a distribution information and a distribution condition having an information distribution region and attributes of service users; and

said server system includes:

means for monitoring, based upon position  
35 information from service users for which utilization of an information providing service has been registered, the state of distribution of service users who have said attributes and are present in the information distribution region designated by the information  
40 provider; and

means for distributing prescribed information to mobile information terminals of service users having said attributes based upon the state of distribution of service users.

45 37. An information distribution service providing

system, which has a server system and an information provider terminal connected to the server system via network, for distributing information, which has been requested by an information provider, via the network from the server system to mobile information terminals of service users for which utilization of an information providing service has been registered, wherein said server system includes:

- 5 (a) means having an interface, which is for sending and receiving various information to and from an information provider, for receiving via this interface a distribution condition such as a region designated by the information provider, and storing this region;
- 10 (b) means having an interface, which is for sending and receiving various information to and from a mobile information terminal possessed by a service user, for receiving position information of the service user sent via this interface autonomously or in response to an inquiry from the server system, and storing this position information;
- 15 (c) means for extracting and storing a service user located in a region that has been designated by the information provider;
- 20 (d) means for dividing the region that has been designated by the information provider into unit zones of small area and storing the region as a set of the zones;
- 25 (e) means for identifying service users located in density each of the unit zones, calculating an attribute-by-attribute distribution density and variance of the service user on a per-unit-zone basis, and storing the distribution densities and variance;
- 30 (f) means for editing prescribed information, which has been designated by the information provider, based upon the results of calculating the distribution density of each attribute and the variance of the distribution density, and reporting the edited information to the information provider;
- 35 (g) means for receiving and storing location of the information provider;
- 40 (h) means for receiving and storing information desired to be distributed from the information provider;
- 45 (i) means for receiving, from the information



provider, distribution conditions such as attributes of service users to whom information is to be distributed and distribution-destination information, and storing these conditions; and

5           (j) means for extracting service users, to whom information is to be distributed, based upon the distribution conditions such as the attributes and distribution-destination information, deciding an effective method of distribution of distribution  
10 information, which has been received from the information provider, based upon said results of calculating the distribution density of each attribute and the variance and transmitting to said extracted  
15 users said distribution information that has been received from the information provider.

38. The system according to claim 37, wherein said server system includes the following means as the means for calculating user attribute-by-attribute distribution density:

20           means for obtaining and storing the area of a designated region;

            means for extracting users who have a designated attribute from among service users located in the designated region, and storing the number of these  
25 users;

            means for calculating distribution density using the area obtained and the number of users having the designated attribute, and storing the distribution density; and

30           means for storing a time-series change in distribution density of any user attribute and variance of the distribution density in any region designated by an information provider or server system operator.

39. The system according to claim 37, wherein said  
35 server system includes:

            means for deciding an effective method of distribution of information, which has been received from an information provider, based upon said results of the calculation; and

40           means for transmitting said distribution information to the service users based upon a reference that has been designated by an information provider or server system operator.

40. The system according to claim 37, wherein said  
45 server system includes:

means for accepting, storing and statistically analyzing reaction of the users to said distribution information;

5 means for reporting the results to the information provider or server system operator; and

means for reporting said results of the calculation and a predicted change based upon these results to the information provider or server system operator.